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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/063,699	05/08/2002	Dan L. Eaton	P3230R1C001-168	9949

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EXAMINER	
DUFFY, PATRICIA ANN	

ART UNIT	PAPER NUMBER
1645	

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/063,699	EATON ET AL.	
	Examiner	Art Unit	
	Patricia A. Duffy	1645	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 March 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *4-6,11-14 and 16-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *4-6,11-14 and 16-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2005*.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☒ Other: SEQUENCE ATTACHMENT

2.0D

Response to Amendment

The response and amendment filed 3-21-05 has been entered into the record. Claims 1-3, 7-10 and 15 have been cancelled. Claims 4-6, 11-14 and 16-31 are pending and under examination.

The text of Title 35 of the U.S. Code not reiterated herein can be found in the previous office action.

Objections/Rejections Withdrawn

The objection to use of the trademarks is withdrawn based on Applicants' amendments.

Rejections Maintained

Priority

Applicants argue that the nucleic acids have credible, specific and substantial utility and that they are entitled to the priority date of 9-10-98 of provisional document 60/099,812. The provisional document does not provide written description of the claims as now set forth for reasons made of record and only describes SEQ ID NO:51 encoding the polypeptide of SEQ ID NO:52. The provisional document fails to establish utility and enablement for the now claimed polypeptides in any of the priority documents for reasons made of record herein. Description of the protein of SEQ ID NO:52 in the provisional application does not provide compliance with 35 USC § 120 for reasons set forth in the previous office action of record and reasons set forth herein. Applicants are not granted priority for the provisional document 60/099,812.

Applicants maintain the argument that the data in Example 18 (tumor versus Normal Differential Tissue Expression Distribution), relied on in part for the utility of the claimed nucleic acids, were first disclosed in PCT Application PCT/US00/23328 filed 8-24-00 on page 93, line 3, through page 96, line 35. This is not persuasive, the priority document does not comply with 35 USC § 120, written description, utility and enablement for reasons set forth in the previous office action of record and reasons set forth herein. This relied upon utility is not a substantial utility for reasons made of record and argued herein.

The priority date is the instant filing date of 5-8-02.

Claims 4-6, 11-14 and 16-31 stand rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a specific, substantial and credible asserted utility or a well-established utility is maintained for reasons made of record.

Applicants' arguments have been carefully considered but are not persuasive. Applicants review the record of the rejection in pages 17-23 of the response. At page 23, Applicants argue that the requirement for a substantial utility defines a "real world use" and cite *Brenner v Manson*, 383 US 519,534(1996) already of record. Applicants argue that MPEP 2107.01 that states that office personnel must be careful not to interpret the phrase "immediate benefit to the public" or similar formulation to mean that products or services based on the claimed invention must be "currently" available to the public. This is not persuasive, the rejection set forth did not require "current public availability", but a specific and substantial utility for the now claimed invention. Applicants argue that any reasonable use that an applicant has identified for the invention that can be viewed as providing a public benefit should be accepted as sufficient, at least with regard to defining a "substantial utility". This is not persuasive, the relied upon utility (increased nucleic acid levels in normal tissue as compared to compared to melanoma) specifically requires or constitutes carrying out further research to identify or reasonably confirm a

"real world" context of use and as such is therefore not a "substantial utility" (see MPEP 2107.01(1)). Applicants argue that the USPTO must establish that it is more likely than not that one of skill the art would doubt the truth of the statement of utility, namely that the gene is differentially expressed in certain cancers compared to normal tissue and useful as a diagnostic tool. The argument has been fully considered, but is not persuasive. Utility requires that the skilled artisan be able to use the claimed invention. The specification does not provide a specific and substantial or a well-established use for reasons made of record. Applicants have provided a single analysis of nucleic acid without any relative range for basing a utility of alleged over-expression in normal tissue. There is no guidance on how to use this information. No levels (relative or absolute) are particularly disclosed. Applicants maintain the argument that if the gene is differentially expressed in cancer versus non-cancer tissue, then its mRNA useful as diagnostics. This argument is pertinent to the instant claims because of the functional limitation added wherein the nucleic acid is over expressed in normal tissue as compared to melanoma. The argument has been fully considered, but is not persuasive. The specification does not set forth the specifics with respect to a diagnostic assay. The number of samples tested, the assay parameters, the probes/primer used and the normal and tumor ranges and statistical significance. In order to be able to use a nucleic acid as a diagnostic, the skilled artisan must have the parameters in front of them. This specificaiton does not set the parameters forth such that the utility is provided in a "real world" form for a diagnostic assay. It merely invites the skilled artisan to further experimentation to determine the significance, if any, of the observation of increased in normal as compared to melanoma. This need for further experimentation indicates that the invention was not present in the specificaiton in a "real world form". The courts have held that the disclosure is insufficient when testing is necessary to determine the actual use or possible lack of use *(In re Kirk and Petrow* 153 USPQ 48 (CCPA 1967). The art of record Hu et al specifically cautions against drawing any conclusions regarding differences less than 10-fold

differences in mRNA expression. This is important to the instant utility since the specification is devoid of absolute levels of mRNA Hu et al was used to indicate that mere alleged 2-fold increase in mRNA does not establish a role in cancer/tumor. The diagnostician cannot ascertain, the significance of the alleged difference in expression. Applicants attempt to rely upon multiple declarations to further describe how the assays were performed and the alleged significance of the results. It is maintained that it is the specification, as filed, that must supply the critical details for a sufficient correlation of the maker with disease. Many of these critical details are missing or absent. The declarations attempt to supply the missing critical information and in large part state conclusions based on experience and proffer no evidence with respect to the claimed nucleic acids. In contrast, to Applicants arguments, Hu et al and Haynes et al were provided to specifically rebut the opinions expressed by Declarants'. It is noted any arguments with respect of the correlation of mRNA levels with protein levels are moot in view of the removal of the "encoding SEQ ID NO:52" from the instant claims (i.e. pages 27). Applicants argue that the standard for utility is not a mater of statistical certainty, but more likely than not and reasonable probability. Applicants again rely on an asserted reasonable probability of the mRNA levels with melanoma. This again is not persuasive, the record establishes that one skilled in the cancer diagnostic art would not find it "more likely than not" that the mRNA levels are diagnostic of cancer in the absence of any report of specific levels, assay parameters and statistical variation thereof. Applicants argue the court holdings in *Fujikawa v. Wattanasin*, 93 F3d. 1559, 39 USPQ 2d 1985 (Fed. Cir. 1996) and *Cross v Iizuka*, 753 F.2d 1040, 224 USPQ 739 (Fed Cir. 1985) that indicate that when the *in vitro* results are general predictable of *in vivo* results establishes a significant probability that in vivo testing for the particular pharmacological activity will be successful. This is not persuasive, there is no claimed pharmaceutical composition and the issue is not correlation of in vitro data with in vivo results. In contrast to *Fujikawa v. Wattanasin*, 93 F3d. 1559, 39 USPQ 2d 1985 (Fed. Cir. 1996) and *Cross v Iizuka*, 753 F.2d

1040, 224 USPQ 739 (Fed Cir. 1985) this specification does not statistically significant results, relative ranges and the specific assay parameters for in vitro diagnostic assays. No specific levels are taught, absolute or not. Applicants review the record and indicate that their rebuttal evidence establishes the "more likely than not" standard for utility. The position of the office is that the art of record indicates that there is no reasonable correlation and Hu et al specifically cautions against drawing conclusions about cancer based on differences in mRNA levels, levels that have not been reported in this specification. Applicants again point to the Declaration of Dr. Grimaldi that clarifies the use of pooled samples. This again is not persuasive, it does not establish the particulars of individual variation and statistical significance of individual variation. Diagnostic assays do not use pooled samples. Further, no evidence is proffered to support the conclusion that the use of pooled samples "is more likely to be accurate than data obtained from a single individual". Applicants note that many protein based diagnostics in the art in which the level of a particular protein is assessed to determine whether a patient is suffer from a particular condition do not require a normal sample because initially a normal range of protein levels are defined and the patient sample is quantitated to determine whether it is outside of the normal range. This is not persuasive, this specification does not define a normal range for the claimed nucleic acid or any variant thereof. Pooled samples do not establish a normal range, they are a single data point. Range is established using multiple samples and this specification lacks any statistical analysis of range for either the instantly claimed nucleic acid . Applicants argue that the semi quantitative analysis employed to generate the data of Example 18 is sufficient to determine if a gene is over-expressed or under expressed in tumor versus normal tissue. Mr. Grimaldi declares that the results of Example 18 reflect at least a 2-told difference in cDNA between tumor and normal counterpart. It is noted that the details of the semi-quantitative analysis described by Declarant Grimaldi are not detailed in the specification as filed nor is the "at least 2 fold difference" of the declaration. The specification only teaches "more highly"

and does not indicate that "more highly" is an at least a 2-fold difference. Applicants Exhibit 1 with respect to the visibility of a two fold difference in DNA mass using ethidium bromide staining is noted and provides evidence that an at least 2 fold difference can be observed for 61 ng and 124 ng DNA. However, the declaration remains not persuasive, because the cutoff of the assay as at least 2-fold is not established in the specification as filed for the criteria "more highly expressed". So while a 2-fold may be able to be visualized, the specificaiton does not establish this as the criteria used at the time of filing nor does it establish this as the criteria in the specification at the time of filing to determine "overexpressed". In contrast to Applicants assertions on page 31, the first Grimaldi declaration does not establish that there is at least a two-fold difference in the claimed nucleic acid levels between normal and cancer/tumor. Applicants argue that the precise levels of gene expression are irrelevant, merely that they levels of tumor and normal are different. This is not persuasive, because it is only useful if the differences are statistically significant from the normal as compared to the tumor/cancer. The specification as originally filed does not establish this criticality for diagnostics. It is the specification that must provide the critical details to establish diagnostic utility at the time of filing. The differences have to be reproducible and statistically significant and moreover, the levels are extremely important as it relates to the correlation of mRNA with cancer/tumors and use of any nucleic acid as a diagnostic tool to discriminate two populations of individuals. In view of the totality of the evidence of record, one skilled in the art would not more likely than not assume that the mRNA levels were statistically significant between the two populations. The skilled artisan would have to perform further experimentation to verify or rule it out and design the specific assay to assess it since the probes/primers and parameters of the assay in Example 18 are not set forth in such detail that the skilled artisan could repeat or perform the assay. As such, this further experimentation indicates that the asserted utility is not "substantial". Applicants' arguments with respect to the correlation of mRNA levels with protein in pages

31-41 are moot. The claims are no longer drawn to a nucleic acid encoding a protein and therefore issues drawn to the protein and correlation of mRNA with protein expression are moot. Applicants review the declaration of Dr. Ashkenazi that teaches that in situations where protein overexpression does not parallel gene amplification in certain tumor cell types but not others, the protein enables more accurate tumor classification and hence better determination of therapy. This is not persuasive, such is not a contemplated utility of the specification and even if it was, there is no teaching of how to perform any of the asserted use for classification or determination of therapy for melanoma. Applicants hypothesize that if the gene is amplified but not the corresponding protein, then the clinician accordingly will decide not to treat a patient with agents that target that gene product. This is fundamentally flawed, the specification does not teach agents that target the gene product and therefore how could any clinician make any choice of tumor classification and therapy options based on this specification. Applicants continue to maintain that differential expression is that which provides for utility of the present invention. However, it is maintained that the art specifically cautions against drawing conclusions about cancer using differences in mRNA levels, the specification does not set forth the actual levels and does not demonstrate using art standard criteria that the assay provided in the specification leads to a statistical difference between the population of disease and normal, which is required by the cancer diagnostician to diagnose cancer. Applicants argue that Hanna et al supports the position of Dr. Ashkenazi that indicates therapy is chosen based on the presence or absence of the Her-2/neu protein. This is not persuasive, in this case the protein is overexpressed in normal, not in cancer cells and Hanna et al along with the art cited therein have clearly and unambiguously taught a role for Her-2/neu in certain breast cancers. This specification is devoid of such information with respect to the claimed protein and melanoma.

Applicants argue that the PTO has not provided a *prima facie* case, and even if it had the submitted evidence and declarations are sufficient to overcome the *prima facie*

case. It is maintained a *prima facie* case has been established and that the proffered evidence is insufficient to obviate the prima facie case of lack of utility for the protein. Applicants argue that the declaration of Dr. Grimaldi establish that the date in Example 18 are real and significant. This again is not persuasive for all the reasons made of record. The assertion of a diagnostic utility is not found to be substantial for the reasons of record and reiterated herein. Applicants argue the standard of clear inoperability for the entire claims and if it is minimally useful for achieving a useful result a rejection of the claimed invention is not warranted. This is not persuasive. No minimally useful result has been provided with respect to the claimed nucleic acids. In view of the totality of the record, the lack of any particulars with respect to the claimed polypeptides, the teachings of Hu et al it is found that it is not reasonable to conclude that any nucleic acid can be used a diagnostic as asserted. In summary, the instant specification provides a mere invitation to experiment for establishing a specific and substantial use for the claimed polypeptides, which does not reasonably extrapolate to a readily available utility. The rejection is maintained.

Claims 4-6, 11-14 and 16-31 stand rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either a specific, substantial and credible asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention for reasons made of record.

Claims 4-5, 12-14 and 16-31 stand rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed,

had possession of the claimed invention is maintained for reasons made of record in the first office action on the merits mailed 6-15-04.

Applicants' arguments have been carefully considered but are not persuasive. Applicants review the standard for written description. The factual determination in a written description analysis depends on the nature of the invention and the amount of knowledge imparted to those skilled in the art by the disclosure. Applicants rely on the level of knowledge and skill in the art and the teachings provided by the specification and assert that the inventor is not required to teach every single detail of the invention. This is not persuasive, the teachings must provide conception by way of written description for the claimed genus. As previously set forth, a single polynucleotide and a single polypeptide does not provide support for conception of variants period. The specification contemplates that the polypeptides can be a homolog in other species or human variants as isolated from nature. This specification fails to teach any variation of SEQ ID NO:51 or fragment thereof that complies with either of those contemplated situations. Applicants have not provided a representative number of species by way of written description to support possession of the genus of variants now claimed. Applicants were not in possession of a genus. Applicants neither isolated, cloned nor otherwise identified variants that fell within the genus. The skill in the art does not change this fact. There are no other disclosed nucleic acids that fall within the genus and meet that claimed functional criteria of more highly expressed in normal skin tissue as compared to melanoma. The sole single *human* polypeptide species described is PRO1411 of SEQ ID NO:51. No written description is provided in the specification for any other species of PRO1411 molecules, in which disclosure of a single "human" polynucleotide sequence (*which the claims are not limited toward*) does not reasonably constitute "the claimed genus of polynucleotides". Analogous to the situation decided in *Fiers v. Revel*, 25 USPQ2d 1601, 1606 (Fed. Cir. 1993), "an adequate written description of a DNA [product] requires more than a mere statement that it is part of the invention and reference to a potential method

for isolating it; what is required is a description of the DNA itself". *Fiddes v. Baird*, 30 USPQ2d 1481, 1483 (1993) held that claims directed to mammalian FGFs were found unpatentable due to lack of written description for the broad class, in which the specification had provided an adequate description of only the bovine sequence. Similarly, only the single *human* polynucleotide specie of SEQ ID NO: 51 has been described in the instant specification. Accordingly, the court held in *Univ. California v. Eli Lilly and Co.*, 43 USPQ2d 1398 (Fed. Cir. 1997) that: "One skilled in the art therefore cannot, as one can do with a fully described genus, visualize or recognize the identity of the members of the genus. A definition by function (i.e. hybridization), as we have previously indicated, does not suffice to define the genus because it is only an indication of what the gene does, rather than what it is" and that: "A description of a genus of cDNAs [products] may be achieved by means of a recitation of a representative number of cDNAs [products], *defined by nucleotide sequence*, failing in the scope of the genus or of a recitation of structural features common to the members of the genus, *which features constitute a substantial portion of the genus* [emphasis added]. This is analogous to enablement of a genus under 112, [first paragraph], by showing the enablement of a representative number of species within the genus. See *Angstadt*, 537 F.2d at 502-03, 190 USPQ at 218". A biomolecule sequence described only by a functional characteristic, without any known or disclosed correlation between the biological function and the structure of the sequence is not a sufficient identifying characteristic for written description purposes, even when accompanied by a method of obtaining the claimed sequence. *In re Bell* F.2d 781, 26 USPQ2d (Fed. Cir. 1993). This specificaiton provides, an invitation for others to discover a representative number of species with a known or disclosed correlation between function and structure, or by a combination of such identifying characteristics has not reasonably been provided within the instant specification. A lack of adequate written description issue also arises if the knowledge and level of skill in the art would not permit one skilled in the art to immediately envisage the product claimed. See for example *Fujikawa v*

Wattanasin, 93 F.3d 1559, 1571, 39 USPQ2d 1895, 1905 (Fed. Cir. 1996) (a "laundry list" disclosure of every possible moiety does not constitute a written description of the a genus because it would not "reasonably lead" those skilled in the art to any particular species. In the instant case, while the skilled artisan may envision may changes to the polynucleotide of SEQ ID NO:51, one can not envision what changes to the structure or what part of the structure of SEQ ID NO:51 are conserved as it correlates with the now claimed properties of variation or hybridization. This is clearly distinguished from Example 9 and 10 of the guidelines, where those examples specifically indicate that the hybridization conditions were used to isolate and obtain nucleic acids having those characteristics. In the instant case, the hybridization conditions have not been used to isolate other nucleic acids and Applicants were not in possession of such at the time of filing. Structurally similar DNA's are not necessarily functionally similar DNA's for diagnosis of melanoma. Any nucleic acid can be used as a probe or primer from that which it is derived and as such, the "use" limitation does not functionally circumscribe the invention disclosed in the specification as a mRNA that is overexpressed in normal tissue as compared with melanoma. The specification provides no guidance and does not set forth a representative number of polynucleotides with the claimed property to allow the skilled artisan to envision the genus and the distinguishing identifying characteristics of the now claimed genus. Thus, Applicant was not reasonably in possession of the "claimed genus of polynucleotides". Applicants argue make and use and that they must have the same expression in certain tumors. This is not persuasive, there is nothing in the hybridization claims that sets forth that the nucleic acid is restricted to certain tumors as argued. Further, in the claims where it is, there is no description of these mRNA variants in the specification as filed. Applicants argue other patents issued by the office to variants or nucleic acids when Applicants did not actually make them. This is not persuasive MPEP 2100 specifies that certain issues are resolved on a case by case basis (utility, anticipation, obviousness, compliance with written description requirement) and it is well

settled that whether similar claims have been allowed to others is immaterial. See *In re Giolito*, 530 F.2d 397, 188 USPQ 645 (CCPA 1976) and *Ex parte Balzarini* 21 USPQ2d 1892, 1897 (BPAI 1991). The specification did not describe the genus as now claimed and the single specie provided does not provide the necessary common attributes as asserted by Applicants for reasons made of record.

Claims 4-6, 13, 14 and 26-31 stand rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement for reasons made of record.

The declaration persuant to 37 CFR 1.808 is insufficient to obviate this rejection because it (a) is not signed by an attorney of record over his/her registration number .

Claims 4-6, 14 and 16-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Baker et al (WO 01/64888, published September 20, 2001 with priority to December 1, 2000) is maintained for reasons made of record in the Office Action mailed 7-2-04.

Applicants' arguments have been carefully considered but are still not persuasive. Applicants argue that they are entitled to their earliest priority date of the provisional application and therefore the reference is not available because it is not prior to the filing date of the provisional application. This is not persuasive, priority is not granted to any of the prior Applicants because the claimed invention lacks utility, enablement and written description in the priority documents for reasons made of record.

Claims 4-6, 11-14 and 16-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Baker et al (US PreGrant Publication published Feb 6, 2003 with an earlier filing date of September 20, 2000 with priority to December 1, 2000) is maintained for reasons made of record in the Office Action mailed 7-2-04.

Applicants' arguments have been carefully considered but are still not persuasive. Applicants argue that they are entitled to their earliest priority date of the provisional application and therefore the reference is not available because it is not prior to the filing date of the provisional application. This is not persuasive, priority is not granted to any of the prior Applicants because the claimed invention lacks utility, enablement and written description in the priority documents for reasons made of record.

Claims 4-6, 11-14 and 16-31 stand rejected under 35 U.S.C. 102(b) as being clearly anticipated by Ashkenazi et al (WO 00/77037, published December 12, 2000) for reasons made of record.

Applicants correct the record regarding the publication date of Ashkenazi et al. The record stands corrected. Applicants argue the priority date of the instant application is entitled to PCT Application PCT/US00/23328 filed 8-24-00. This is not persuasive in order to be accorded the priority date of an earlier Application, the prior application must have written description (of the claimed variants) and be enabled (i.e. use of SEQ ID NO:51) for the claimed invention. The prior application lacks both of these criteria and therefore the priority date is maintained. The art is maintained in view of the lack of accorded priority to the PCT Application.

New Rejections Based on Amendment

Claims 14, 16 and 21-25 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 14, 16 and 2-25 recite the term "at least about X nucleotides in length". This term is indefinite because the recitation of "at least" indicates that the isolated nucleic acid should have the minimum number of nucleotides, however in combination with the term "about" which provides for a range above and below the indicated "X nucleotides

in length" renders the lower limit unclear and ambiguous. As such, the skilled artisan would not know if they were infringing the isolated nucleic acid or not.

Claims 14 and 21-25 stand rejected under 35 U.S.C. 102(b) as being clearly anticipated by Valenzuela et al et al (WO 99/55721, published November 4, 1999).

Valenzuela et al teach a nucleic acid that has at least 300 consecutive nucleotides in common with SEQ ID NO:51 (see attached alignment with AAZ43802) and as such anticipates the instantly claimed invention. The sequence of the prior art inherently hybridizes under stringent conditions absent convincing evidence to the contrary.

Status of Claims

Claims 4-6, 11-14 and 16-31 stand rejected.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia A. Duffy whose telephone number is 571-272-0855. The examiner can generally be reached on M-Th 6:30 am - 6:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynette Smith can be reached on 571-272-0864.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Patricia A. Duffy

Primary Examiner

Art Unit 1645